

REMARKS

This Amendment is in response to the Office Action of September 30, 2004. In the Office Action, the Examiner indicated that Claims 1-18 are pending, and Claims 1-18 are rejected. With this Amendment, Claims 1, 2, 5, 6, 10, 11 and 15 are amended, and Claims 1-18 are presented for reconsideration and allowance.

Claim Rejection - 35 USC 103

The Examiner rejected Claims 1, 4-10 and 13-18 under 35 USC 103(a) over Zamora et al. (US 4,887,212) in view of Kucera et al. (US 4,864,502) and further in view of Anick et al. (US 5,559,693).

With this Amendment, independent Claims 1, 10 are amended to include morphology tables that include case endings for nouns, adjectives and determiners that are not unique to a particular case, and that include tables for verbs that include expected cases of complements of verbs, where an initial case combination is compared to a correct combination as a function of the case endings and the expected cases, and generating a combination of sentence rewrites that includes a change of case endings.

Zamora teaches a parser for natural language text that includes morphological analysis and dictionary look-up and parsing natural language text. Zamora, however, teaches only the simple examples of English and French languages in which the case of noun phrases can be determined from sentence word order. In the German language, however, case is generally not indicated by word order. In the German language, case is indicated, often ambiguously, by case endings (and sometimes other spelling inflections) of nouns, adjectives and determiners in a noun phrase. Each of the available parts of a noun phrase (determiner, adjective, noun) has case endings that may give a hint of case as a complex function of:

--grammatical gender,
-- numerosity,
--presence/absence of a determiner, and
--whether the determiner, if present, is a definite or indefinite determiner.

An example of this complexity is illustrated in FIG. 1 of the present application. As can be seen from FIG. 1, a particular case ending (such as -en, for example), is not unique to a case, but appears multiple times in the table for all cases (nominative, dative, accusative), but may exclude some combinations of case, gender and numerosity.

As recited in Claims 1, 10, as presently amended, the morphology table includes case endings for nouns, adjectives and determiners. While the individual case endings in a noun phrase, taken singly, are not unique to a particular case, in many instances the available cases ending of a noun, adjective and determiner can, taken together identify the case of one of the noun phrases in a sentence. When this information is compared with the expected cases, then it becomes possible to identify the possible cases of remaining noun phrases and generate a combination of possible sentence rewrites. This complex arrangement of comparing as a function of the case endings and the expected cases is neither taught nor suggested by Zamora.

Kucera also does not teach or suggest this complex arrangement of comparing as a function of case endings and the expected cases. Anick also does not teach or suggest this complex arrangement of comparing as a function of case endings and the expected cases. Anick instead teaches a simpler process of conjugating German verbs.

None of the references cited by the Examiner in rejecting Claims 1, 4-10 and 13-18 teach or suggest morphology tables that include case endings for nouns, adjectives and determiners that are not unique to a particular case, nor do they teach or suggest

comparing an initial case combination to a correct case combination as a function of the case endings and the expected cases, nor do they teach generating a combination of sentence rewrites that includes a change of case endings as presently claimed in amended Claims 1, 10. Claims 1, 10, as well as dependent Claims 4-9 and 13-18 are thus believed to be patentable. Reconsideration and allowance of Claims 1, 4-10 and 13-18 is therefore requested.

Claim Rejection - 35 USC 103

The Examiner rejected Claims 2-3 and 11-12 under 35 USC 103(a) over Zamora in view of Kucera and Anick as applied to Claims 1 and 10 above, and further in view of well known prior art (MPEP 2144.03).

As discussed above, independent Claims 1, 10 are amended to define patentable subject matter over Zamora, Kucera and Anick. With the amendments made to the independent claims, dependent Claims 2-3, 11-12 are also believed to be patentable over these references.

Relative to Claim 11, The Examiner takes official notice of "the feature of displaying alternative selections in an order of higher likelihood first" as well known in the art. With this Amendment, Claim 11 is amended to recite: a display of the sentence rewrites in an order from most likely changes of case endings to the least likely changes of case endings to be accepted by a user. The feature of displaying most likely to least likely case endings is not well known in the art. Withdrawal of the rejection as well known prior art is therefore requested. Reconsideration of the rejection of Claims 2-3 and 11-12 and allowance of Claims 2-3 and 11-12 is therefore requested.

The application appears to be in condition for allowance and favorable action is requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

David C. Bohn, Reg. No. 32,015
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312